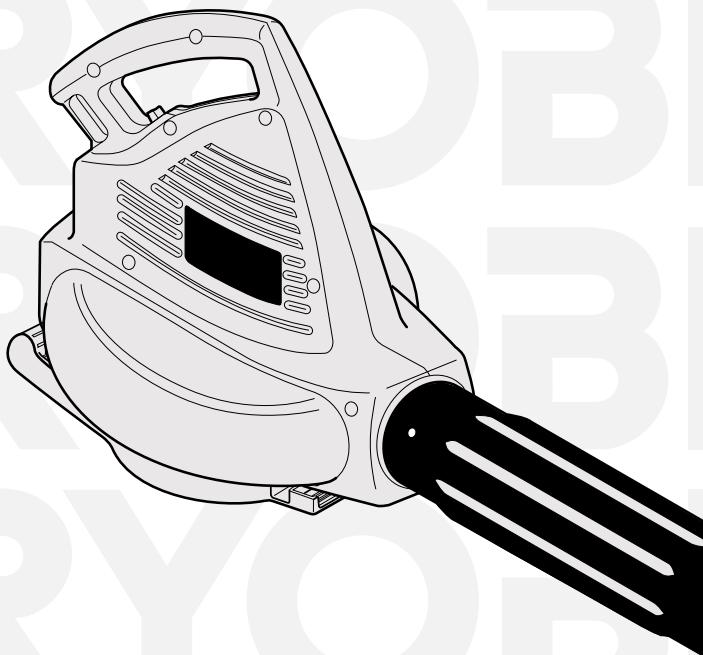


RYOBI®

MODEL 180r and 190r ELECTRIC BLOWER/VAC OPERATOR'S MANUAL



FOR QUESTIONS, CALL 1-800-345-8746 in U.S.
OR 1-800-265-6778 in CANADA

IMPORTANT MANUAL

DO NOT THROW AWAY

INTRODUCTION

THANK YOU

Thank you for purchasing this quality product. This modern outdoor power tool is designed to provide many hours of useful service. You will find it to be a great labor-saving device.

This operator's manual provides you with easy-to-understand operating instructions. Read the entire operator's manual and follow all of the instructions to keep your new outdoor power tool in top operating condition.

PRODUCT REFERENCES, ILLUSTRATIONS AND SPECIFICATIONS

All information, illustrations and specifications in this manual are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

Copyright © 1997 Ryobi Outdoor Products, Inc. All Rights Reserved.

NOTE: PROOF OF PURCHASE WILL BE REQUIRED FOR WARRANTY SERVICE.

SERVICE INFORMATION

Service on this unit both within and after the warranty period should be performed only by an authorized and approved service dealer.

Dial **1-800-345-8746** in the United States and **1-800-265-6778** in Canada to obtain the listing of the authorized service dealer nearest you.

Do not return the unit to the retailer.

TABLE OF CONTENTS

I. Safety Warnings	3-6
A. Safety and International Symbols	6
II. Assembly Instructions	7-9
A. Blower Assembly	7
B. Vacuum Assembly	7
III. Operating Instructions	10-11
A. Extension Cord	10
B. Switch	10
C. Operating as a Blower	10
D. Operating as a Vacuum	11
E. Shoulder Strap	11
IV. Maintenance and Repair Instructions ..	12
A. Servicing of Double-Insulated Units ..	12
B. Clearing a Blocked Impeller	12
C. Cleaning the Blower/Vacuum	12
D. Cleaning the Vacuum Bag	12
E. Inspecting the Extension Cords	12
F. Storage	12
G. Accessories/Replacement Parts	12
V. Specifications	13
VI. Notes	13
VII. Warranty	14

CONTENTS OF CARTON

This unit includes the following:

- Blower/Vacuum Model 180r or 190r
- Blower Tubes
- Vacuum Tubes
- Vacuum Elbow Tube
- Vacuum bag
- Operator's Manual
- Owner's Registration Card

Examine all parts to make certain that nothing is missing and no breakage has occurred during shipping. Any damaged or missing part must be replaced before using this product.



WARNING: The operation of any blower/vacuum can result in foreign objects being thrown in the eyes, which can result in severe eye damage. Before beginning your unit's operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. A wide vision safety mask for use over eyeglasses, or standard safety glasses with side shields is recommended.

SAFETY WARNINGS

THE PURPOSE OF SAFETY SYMBOLS IS TO ATTRACT YOUR ATTENTION TO POSSIBLE DANGERS. THE SAFETY SYMBOLS, AND THE EXPLANATIONS WITH THEM, DESERVE YOUR CAREFUL ATTENTION AND UNDERSTANDING. THE SAFETY WARNINGS DO NOT BY THEMSELVES ELIMINATE ANY DANGER. THE INSTRUCTIONS OR WARNINGS THEY GIVE ARE NOT SUBSTITUTES FOR PROPER ACCIDENT PREVENTION MEASURES.

SYMBOL MEANING



SAFETY ALERT SYMBOL:

Indicates danger, warning or caution. May be used in conjunction with other symbols or pictographs.



DANGER: Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.



WARNING: Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.



CAUTION: Failure to obey a safety warning may result in property damage or personal injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

NOTE: Advises you of information or instructions vital to the operation or maintenance of the equipment.

• IMPORTANT SAFETY INFORMATION •



WARNING: When using this Blower/Vacuum, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury. Make sure this manual is carefully read and understood before starting or operating this equipment.

READ ALL INSTRUCTIONS

ELECTRICAL SAFETY WARNINGS

- This tool is double-insulated. Use only identical replacement parts when servicing.
- Ground Fault Circuit Interrupter (GFCI) protection should be provided on the circuit(s) or outlet(s) to be used for the gardening appliance. Receptacles are available having built-in GFCI protection and may be used for this measure of safety.

- **WARNING:** To reduce the risk of electrical shock, use only extension cords approved for outdoor use, such as an extension cord of cord type SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJOW-A, SJTW-W or SJTOW-A. A 2-wire extension cord (an extension cord without a ground) may be used because the tool is double insulated. However, a 3-wire extension cord (an extension cord with a ground) that uses a NEMA type connector (parallel blade, U ground) may also be used. Extension cords are available from your local retailer. Use only round-jacketed extension cords approved for outdoor use.
- To reduce the risk of electrical shock, this unit has a polarized plug (one blade is wider than the other). This unit will fit with a polarized plug only one way. If the plug does not fit fully into the unit, reverse the plug. If it still does not fit, use a cord with the correct connection. If the cord does not fit into the power supply outlet, contact a qualified electrician to install the proper outlet. Do not modify the cord or unit in any way.

SAFETY WARNINGS

- **CORD SETS:** Make sure your cord set is in good condition. When using a cord set, be sure to use a cord that is heavy enough to carry the current that your unit will draw. An undersized cord set will cause a drop in line voltage resulting in loss of power and overheating. The table shows the correct size to use depending on the cord length and nameplate amperage rating. If in doubt, use the next heavier size line gauge. The smaller the gauge number, the heavier the cord. To reduce the possibility of disconnection of the unit from the cord set during operation, see Fig. 14, page 10.

MINIMUM WIRE SIZE FOR EXTENSION CORDS FOR 120 VOLT APPLIANCES				
Cord length (ft)	25	50	100	150
Amperage Rating	Wire size (AWG)			
6 to 10 amps	18	16	14	12
10 to 12 amps	16	16	14	12
12 to 16 amps	14	12	NOT RECOMMENDED	

- A nameplate on your unit indicates what voltage it uses. Never connect the unit to an AC voltage that differs from this voltage.
- Inspect all extension cords and the unit power connection periodically. Look closely for deterioration, cuts or cracks in the insulation. Also inspect the connections for damage. Replace the cords if any defects or damage appear.
- Avoid dangerous environments. Never operate your unit in damp or wet conditions. Moisture is a shock hazard.
- Do not use the unit in the rain.
- Do not handle the plug or Blower/Vacuum with wet hands or standing on any wet surfaces.

BEFORE OPERATING

- Read the instructions carefully. Be familiar with the controls and proper use of the unit.
- Children and adolescents must not manipulate units, except for adolescents in training and under the supervision of a specialist.
- Before each use, thoroughly inspect your Blower/Vacuum for loose or damaged parts. Do not use until adjustments or repairs are made.

- All guards and safety attachments must be installed properly before operating the unit.
- Use the unit only in daylight or good artificial light.
- Keep all bystanders, especially children and pets, at least 30 feet (9.2 m) away from the unit during operation.
- Inspect the area before starting the Blower/Vacuum. Remove all debris and hard or sharp objects such as glass, wire, etc.

FOR SAFE OPERATION

- Do not leave the Blower/Vacuum plugged in when not in use, changing attachments, or while being serviced.
- Do not allow this product to be used as a toy.
- Use the right tool. Do not use unit for any job except that for which it is intended. Use only the manufacturer's recommended attachments.
- Avoid accidental starting. Do not carry plugged-in unit with your finger on the switch. Be sure switch is off when plugging in.
- Do not abuse the power cord. Never carry the unit by the cord or yank the plug out of the receptacle. Keep the cord away from heat, oil and sharp edges.
- Do not unplug by pulling on the cord. To unplug, grasp the plug, not the cord.
- Always remain alert. Use common sense. To prevent injury to yourself and others, do not operate this unit if you are fatigued.
- Do not operate the unit while under the influence of drugs, alcohol or medication.
- Wear goggles or safety glasses at all times when operating this Blower/Vacuum.
- Use a face mask or dust mask if operation is dusty.
- Do not overreach or use the unit from unstable surfaces such as ladders, trees, steep slopes, rooftops, etc. Keep proper footing and balance at all times.
- Dress properly. Do not operate this Blower/Vacuum when barefoot or wearing open sandals. Always wear sturdy, rubber-soled footwear. The use of gloves, ear/hearing protection and long pants are recommended.

SAFETY WARNINGS

- Do not wear loose fitting clothing or articles such as scarves, strings, chains, ties, etc., because they could get drawn into the air intake. Also make sure long hair does not get drawn into the air intake. Long hair must be pulled back and secured off shoulders and neck.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dirt, debris and anything that may reduce the air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- Do not point the Blower/Vacuum in anyone's direction or in the direction of windows.
- Do not force unit. It will do the job better and with less likelihood of injury at a rate for which it was designed.
- Avoid situations that could catch the vacuum bag on fire. Do not operate near an open flame. Do not vacuum warm ash from fireplaces, barbecue pits, brush piles, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.
- Never use the Blower/Vacuum without the nozzle tubes attached when in the blower mode or the vacuum tubes and vacuum bag attached when in the vacuum mode.
- Do not use this Blower/Vacuum to pick up liquid or wet materials.
- Turn off all controls before unplugging.
- As a vacuum, the unit is designed to pick up dry material such as leaves, grass, small twigs and bits of paper. Do not attempt to vacuum wet debris and/or standing water as this may result in damage to the Blower/Vacuum and possible electric shock. To avoid severe damage to the impeller, do not vacuum metal, broken glass, etc.
- Unplug the Blower/Vacuum before attempting to install or remove the tubes. The unit must be unplugged and the impeller blades should no longer be turning to avoid contact with the rotating blades.
- Use extra care when cleaning on stairs.







OTHER SAFETY WARNINGS

- Disconnect the unit from the power supply when not in use, before servicing, when changing accessories such as tubes, vacuum bag assembly, etc.
- Use only genuine replacement parts approved by Ryobi when servicing this unit. These parts are available from your authorized dealer. The use of non-standard parts, or other accessories or attachments not designed for this unit, could result in serious injury to the user or damage to the Blower/Vacuum and void your warranty.
- Maintain this Blower/Vacuum with care. Keep the unit clean and serviced for the best and safest performance. Follow the maintenance instructions. Always use a clean cloth when cleaning. Never use strong detergents, gasoline, petroleum-based products, or any strong solvents to clean the unit.
- Keep your unit in good working condition. Follow instructions for servicing and changing accessories. Inspect unit periodically, and if damaged, have it repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
- Store unit indoors. When not in use, appliances should be stored indoors in a dry, and high or locked-up place, out of the reach of children.
- **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use them to instruct other users. If you loan someone this unit, also loan them these instructions.

SAFETY WARNINGS

SAFETY AND INTERNATIONAL SYMBOLS

This operator's manual describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating and maintenance and repair information.

SYMBOL	MEANING
	<ul style="list-style-type: none"> • SAFETY ALERT SYMBOL Indicates danger, warning, or caution. May be used in conjunction with other symbols or pictographs.
	<ul style="list-style-type: none"> • READ OPERATOR'S MANUAL Failure to follow operating instructions and safety precautions in operator's manual can result in serious injury. Read operator's manual before starting or operating this unit.
	<ul style="list-style-type: none"> • FOR SERVICE INFORMATION, CALL: USA: 1-800-345-8746 CANADA: 1-800-265-6778
	<ul style="list-style-type: none"> • WEAR EYE AND HEARING PROTECTION WARNING: Thrown objects and loud noise can cause severe eye injury and hearing loss. Wear eye and ear protection when operating this unit.
	<ul style="list-style-type: none"> • DO NOT USE IN THE RAIN WARNING: Avoid dangerous environments. Never operate your unit in the rain, or in damp or wet conditions. Moisture is a shock hazard.
	<ul style="list-style-type: none"> • BLOWERS AND BLOWER/VACUUMS — ROTATING BLADES CAN CAUSE SEVERE INJURY WARNING: Stop the engine or motor before installing/changing tubes. Do not put hands or any other objects into the vacuum tubes while they are installed on this unit.
	<ul style="list-style-type: none"> • KEEP BYSTANDERS AWAY WARNING: Keep all bystanders, especially children and pets, at least 30 feet (9.2 m) away from the operating area.

ASSEMBLY INSTRUCTIONS

BLOWER ASSEMBLY



WARNING: To avoid serious personal injury, be sure the unit is off and unplugged before assembling any components.

1. With the unit off and unplugged, install the blower tube onto the motor housing. Turn the tube clockwise until it locks (Figs. 1, 2 and 3).

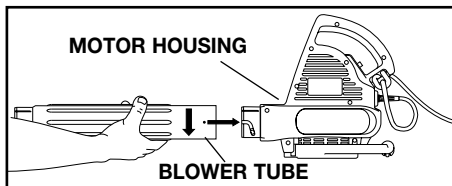


Fig. 1

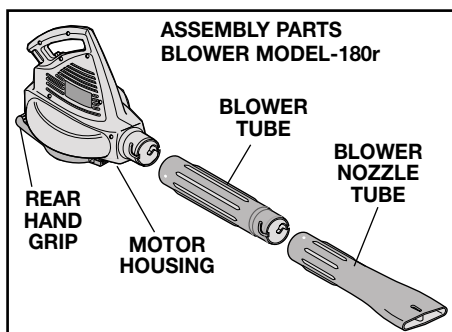


Fig. 2

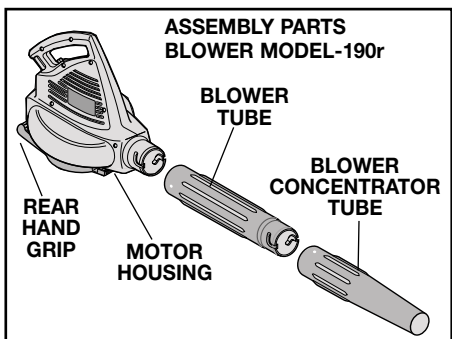


Fig. 3

2. Insert the blower nozzle or concentrator tube onto the blower tube and turn it clockwise to lock (Figs. 2, 3 and 4).

NOTE: The blower tube and nozzle or concentrator tube must be used at all times when in blower mode to prevent the motor from overheating.

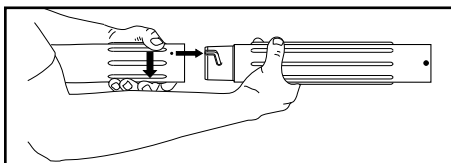


Fig. 4

VACUUM ASSEMBLY



WARNING: To avoid serious personal injury, be sure the unit is off and unplugged before assembling any components.



WARNING: To avoid serious personal injury, the vacuum tube assembly must be used whenever the vacuum door is open to avoid contact with rotating blades.

1. With the unit off and unplugged, release the vacuum door by carefully inserting a flat head screwdriver into the latch opening (Fig. 5). Twist the tip of the screwdriver gently and pull open the door with your other hand (Figs. 5 and 6).

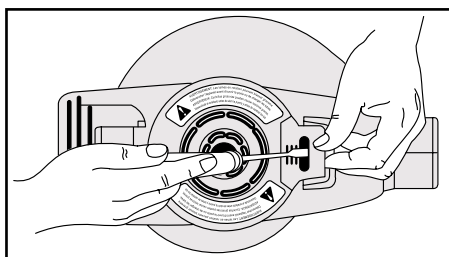


Fig. 5

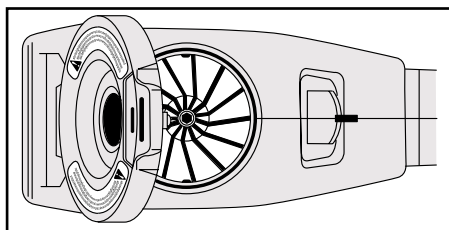


Fig. 6

ASSEMBLY INSTRUCTIONS

- Align the arrow on the upper vacuum tube with the arrow on the motor housing (Fig. 7). Note that the flat on the upper vacuum tube faces the vacuum door as you install the tube.

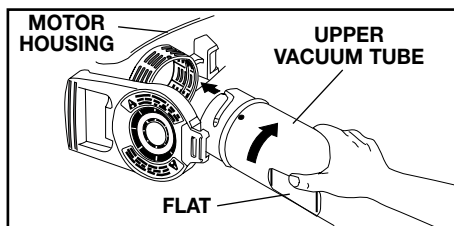


Fig. 7

- Slide the upper vacuum tube into the motor housing. Turn the tube clockwise until the dot on the tube aligns with the dot on the motor housing (Fig. 8).

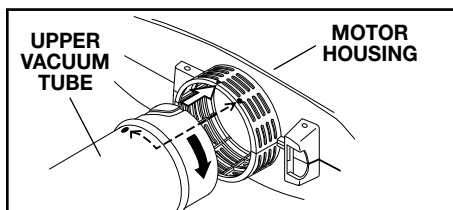


Fig. 8

- Slide the lower vacuum tube into the upper vacuum tube. The arrow on the lower vacuum tube should align with the arrow on the upper vacuum tube (Fig. 9).
- Turn the tube clockwise until the dot on the lower vacuum tube aligns with the dot on the upper vacuum tube (Fig. 9).

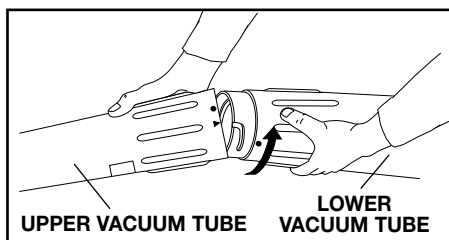


Fig. 9

NOTE: For electric vacuum kits, the shorter end of the vacuum bag elbow tube with the raised ribs should be inserted through the zipper opening (Fig. 10).

- Open the zipper on the large end of the vacuum bag.
- Insert the vacuum elbow tube through the zipper opening in the vacuum bag (Fig. 10), then through the bag opening in the other end of the bag, until the bag tube opening is seated against the tube flange.

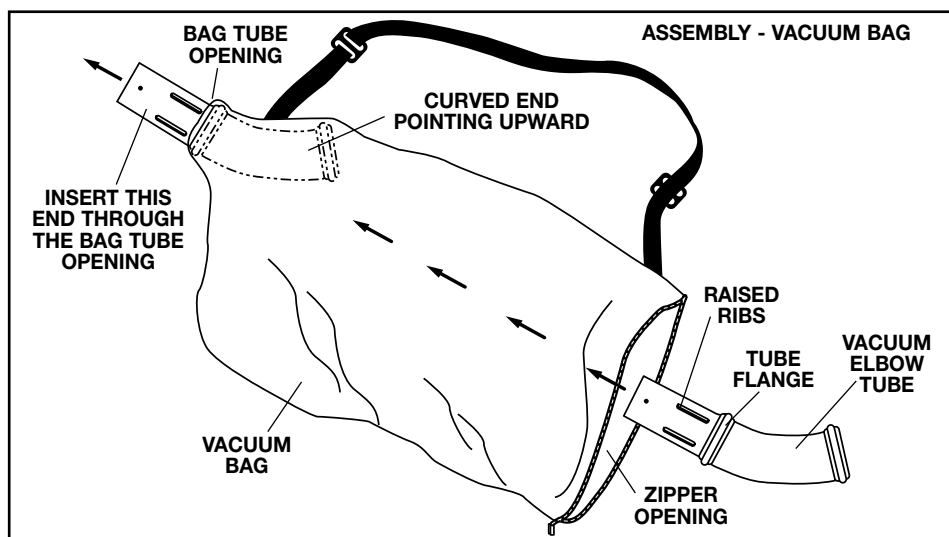


Fig. 10

ASSEMBLY INSTRUCTIONS

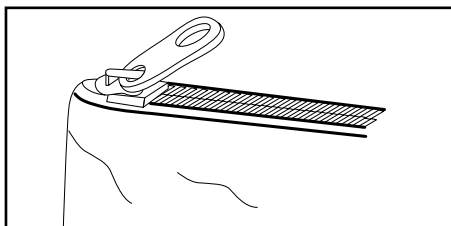


Fig. 11

8. Close the zipper on the bag (Fig. 11).
9. Align the vacuum bag/elbow tube assembly with the grooves on the motor housing (Figs. 12 and 13).
10. Install the vacuum bag/elbow tube assembly onto the motor housing. Turn the assembly clockwise until it locks (Fig. 12).



WARNING: Vacuum bag assembly must be used at all times during vacuum mode to prevent personal injury from objects being discharged from blower outlet and to prevent overheating of motor.

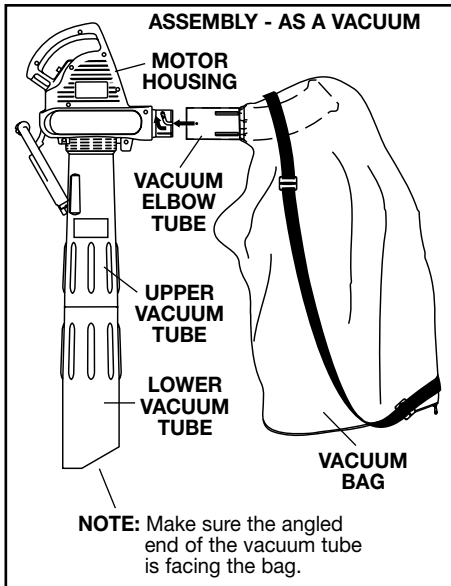


Fig. 12

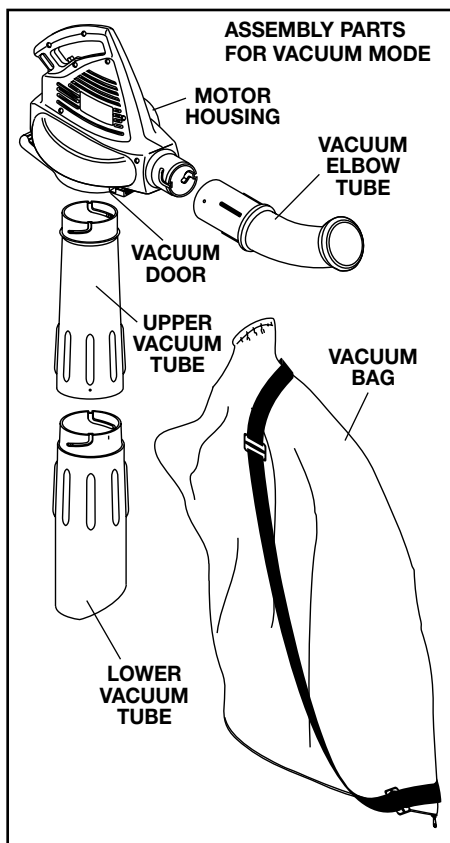


Fig. 13

OPERATING INSTRUCTIONS

1. Use an appropriate extension cord to connect to power. See Electrical Safety Warnings for recommended cords.



WARNING: To reduce the risk of electric shock, this unit has a polarized plug (one blade is wider than the other). The outdoor extension cord used with the unit must also be polarized. The plug on the extension cord will fit into the unit only one way. If the plug doesn't fit fully into the unit, reverse the plug. If it does not fit, use a cord with a correct connection. If the cord does not fit into the power supply outlet, contact a qualified electrician to install the proper outlet. DO NOT change the plug on the extension cord or unit in any way.

2. Secure the extension cord to motor housing as shown (Fig. 14).

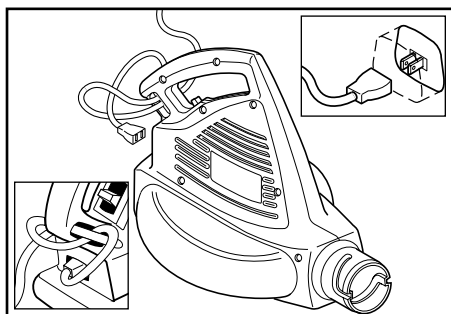


Fig. 14

STARTING AND STOPPING THE BLOWER/VAC

This unit is equipped with an OFF/LOW/HIGH switch (Fig. 15). For low speed operation, slide the switch up to the first click (A). To select high speed, slide the switch up to the second click (B). To turn the unit off, slide the switch all the way down (C).

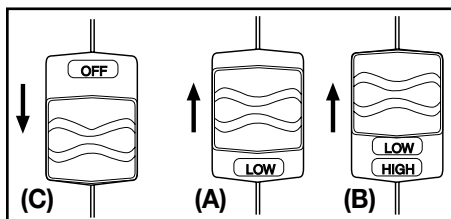


Fig. 15



WARNING: To avoid serious personal injury, wear goggles or safety glasses at all times when operating this unit. Wear a face mask or dust mask in dusty locations.

OPERATING AS A BLOWER

Hold the blower as shown in Figs. 16, 17, or 18 and sweep from side to side with the nozzle several inches above the ground or floor. Slowly advance, keeping the accumulated pile of debris in front of you.

Most dry blowing operations are better suited to low speed than high. Of course, you may choose to use either and you'll probably find the high speed better for moving heavier items like large debris or gravel.

1. Use the blower for trees, shrubs, flower beds and hard-to-clean areas (Fig. 16).



Fig. 16

2. Use the blower around buildings and for other normal cleaning (Fig. 17).



Fig. 17

OPERATING INSTRUCTIONS

3. Use the blower for walls, overhangs and screens (Fig. 18).

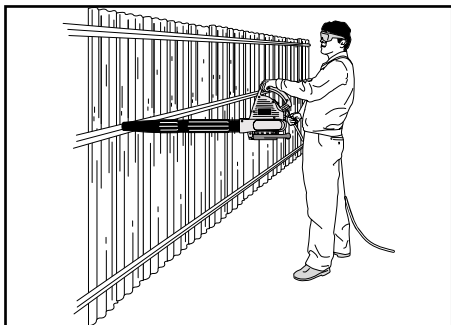


Fig. 18

OPERATING AS A VACUUM



WARNING: To avoid serious personal injury, wear goggles or safety glasses at all times when operating this unit. Wear a face mask or dust mask in dusty locations.



WARNING: Turn off and unplug the unit before opening vacuum door or installing or removing vacuum bag to avoid personal injury from the impeller.

SHOULDER STRAP ADJUSTMENTS

1. With the unit turned off, hold the unit in your left hand in an upright position. Support the lower vacuum tube on the ground (Fig. 19).
2. Place the vacuum bag strap over your head and onto your left shoulder.
3. Extend your right arm toward the rear of the vacuum bag. Adjust the vacuum bag strap until the vacuum bag/shoulder strap seam lies between your thumb and index finger.
4. Make sure the vacuum bag strap is adjusted to allow a free flow of air from the vacuum bag elbow tube (Fig. 19). If the bag is kinked, the tool will not operate properly.



WARNING: To avoid serious personal injury, do not wear loose fitting clothing or articles such as scarves, strings, chains, ties, etc., because they could get drawn into the air intake. Also make sure long hair does not get drawn into the air intake. Long hair must be pulled back and secured off shoulders and neck.



Fig. 19

Hold the vacuum, tilting the suction tube slightly, and use a sweeping action to collect light debris (Fig. 19). The debris will flow into the vacuum bag. Things such as small leaves and small twigs will be mulched as they pass through the fan housing, allowing the vacuum bag to hold a lot of debris.

When the bag is full, suction will noticeably decrease. Turn off and unplug the unit before you unzip the bag. Unzip the bag and empty the contents before continuing.



WARNING: To avoid serious personal injury, never unzip the vacuum bag without first turning off and unplugging the unit.



WARNING: As a vacuum, the unit is designed to pick up dry material such as leaves, grass, small twigs and bits of paper. To avoid serious personal injury, do not attempt to vacuum wet debris and/or standing water as this may result in damage to the Blower/ Vacuum and possible electric shock. To avoid severe damage to the impeller, do not vacuum metal, broken glass, etc.



WARNING: When the upper and lower vacuum tubes are removed, make sure the vacuum door is snapped closed before plugging in the unit, to avoid injury from the impeller.

MAINTENANCE AND REPAIR INSTRUCTIONS



WARNING: To avoid serious personal injury, be sure the unit is off and unplugged before cleaning or performing any maintenance on it.

SERVICING OF DOUBLE-INSULATED UNITS

This unit is double-insulated. In a double-insulated unit, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated unit, nor should a means for grounding be added to this unit.

Servicing a double-insulated unit requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts for a double-insulated unit must be identical to the parts they replace. Refer any repair to an authorized service dealer. A double-insulated unit is marked with the words "DOUBLE INSULATION" or "DOUBLE INSULATED."

CLEARING A BLOCKED IMPELLER

1. Push the switch to the OFF position and disconnect the Blower/Vacuum from the power source and wait for the impeller to stop.
2. Remove the vacuum tubes by reversing the instructions on page 8 (Figs. 7, 8 and 9). The vacuum bag can also be removed by referring to pages 8 and 9 of the Operator's Manual.
3. Carefully remove material blocking the impeller. Inspect the blades to assure no damage has occurred. Rotate the blades by hand to assure the blockage is completely cleared.
4. Replace the vacuum bag and vacuum tubes.
5. Reconnect to power source and resume use.

CLEANING THE UNIT

1. Push the switch to the OFF position and disconnect the Blower/Vacuum from the power source.
2. Use a small brush or the air discharge of a vacuum cleaner brush to keep the air vents free of obstructions.
3. Do not use any strong detergents on the plastic housing or plastic components. Those parts can be damaged by certain household cleaners that contain aromatic oils such as pine and lemon, and by solvents such as kerosene. Moisture can also cause a shock hazard. Wipe off any moisture with a soft cloth.

CLEANING THE VACUUM BAG

1. Empty the bag after each use to avoid deterioration and obstructing air flow, which will reduce the performance of the vacuum.
2. Wearing eye protection and a dust mask, clean the bag as needed. Turn the bag inside out after initial emptying and vigorously shake out dust and debris.
3. Wash the bag once a year or more often if needed as follows:
 - a. Remove the vacuum bag elbow tube. (Reverse the procedure shown in Fig. 10.)
 - b. Turn bag inside out.
 - c. Hang up.
 - d. Hose down thoroughly.
 - e. Hang to dry.
 - f. Reinstall vacuum bag elbow tube (Fig. 10).

INSPECTION OF EXTENSION CORDS

Inspect all extension cords periodically. Look closely for deterioration, cuts or cracks in the insulation. Also inspect the connectors for damage. Replace the cords if any defects or damage appear.

STORAGE INSTRUCTIONS

Store the unit indoors, away from moisture and harmful substances such as fertilizers and solvents. Store in a dry and high or locked-up place, out of the reach of children.

ACCESSORIES/REPLACEMENT PARTS

Vacuum Bag	180464
Vacuum Bag Elbow Tube	180465
Upper Vacuum Tube	180466
Lower Vacuum Tube	180467
Blower Tube	180468
Blower Nozzle Tube (180r)	180469
Blower Concentrator Tube (190r)	181947

SPECIFICATIONS

Motor Amperage	9.5 Amps-Model 180r 12 Amps-Model 190r
Maximum Blower Velocity	130 mph (210 kmh)-Model 180r 180 mph (290 kmh)-Model 190r
Maximum Blower Air Output	320 cfm (9.1 cmm)-Model 180r 350 cfm (9.9 cmm)-Model 190r
Operating Weight (As Blower)	6.4 lb (2.9 kg)-Model 180r 7.2 lb (3.3 kg)-Model 190r
Vacuum Bag Capacity	1.4 bushels (40.7 L)

NOTES

LIMITED TWO-YEAR WARRANTY

RYOBI OUTDOOR PRODUCTS warrants each new RYOBI Product for two (2) years according to the following terms.

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of the RYOBI Product manufactured or supplied by RYOBI and found in the reasonable judgement of RYOBI to be defective in material or workmanship will be repaired or replaced by an authorized RYOBI service dealer without charge for parts and labor.

The RYOBI Product including any defective part must be returned to an authorized service dealer within the warranty period. The expense of delivering the RYOBI Product to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. RYOBI's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any RYOBI Product. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an authorized RYOBI service dealer.

This warranty is limited to ninety (90) days from the date of original retail purchase for any RYOBI Product that is used for rental or commercial purposes, or any other income-producing purpose.

This warranty does not cover any RYOBI Product that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the RYOBI Operator's Manual. This warranty does not apply to any damage to the RYOBI Product that is the result of improper maintenance or to any RYOBI Product that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change its intended use. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the RYOBI Product or adversely affect its operation, performance or durability.

RYOBI reserves the right to change or improve the design of any RYOBI Product without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE TWO (2) YEAR WARRANTY PERIOD OR NINETY (90) DAYS FOR PRODUCTS USED FOR ANY COMMERCIAL PURPOSE. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE TWO-YEAR OR NINETY DAY WARRANTY PERIOD. RYOBI'S OBLIGATION UNDER THIS WARRANTY, IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS, AND ROP DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

RYOBI ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO EXPENSE OF RETURNING THE RYOBI PRODUCT TO AN AUTHORIZED SERVICE DEALER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAM CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty applies to all RYOBI Products manufactured by RYOBI and sold in the United States and Canada.

To locate your nearest service dealer dial 1-800-345-8746 in the United States or 1-800-265-6778 in Canada.

RYOBI®

RYOBI OUTDOOR PRODUCTS

550 N. 54th Street
Chandler, AZ 85226 U.S.A.

RYOBI CANADA INC.

275 Industrial Rd
Cambridge, Ontario N1R 6K2 CANADA

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

FOR QUESTIONS CALL 1-800-345-8746 IN U.S. OR 1-800-265-6778 IN CANADA

OPERATOR'S MANUAL PART NO. 181926
PRINTED IN U.S.A.

REV. A (51400)
11/97